

TRANSACTION REPORT

P.01

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State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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FACSIMILE COVER SHEET

DATE: Mon. Jan. 27, 1997NUMBER OF PAGES INCLUDING THIS COVER SHEET: 4

TO:

PAT GOCHNOURPHONE (303) 770-7580

FAX NUMBER:

(303) 721-9298

FROM:

TONY GALLEGOS (801) 538-5267Minerals Reclamation and Development Program

PHONE:

(801) 538-5701



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Minerals Reclamation and Development Program

PHONE: (801) 538-5291

FAX: (801) 359-3940

SUBJECT: M/037/088 SUMMO

REMARKS: HERE IS A COPY OF MY SPREADSHEET CALCULATIONS
BASED ON THE 3-YEAR MNG PLAN INFORMATION IN
YOUR FAX OF 1/24/97.

Should you encounter any problems with this copy, or do not receive all the pages, please call

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Summo USA Corporation
Lisbon Valley Copper Project
M/037/088

filename m37-88.WB2

last revision 01/21/97
page "ESTIMATE"

San Juan County

Prepared by Utah State Division of Oil, Gas & Mining

1/3
1/24/97 REVISION

Details of Final Reclamation

-This estimate is a revision of the 21-Jan-97 estimate by The Winters Co.
-Items which have changed since the 03-Jan-97 estimate are highlighted

3-YR ESTIMATE

Total disturbed area = **1,048.0 acres**

Activity	area	Quantity	Units	\$/unit	\$
Waste dump A - 190 acres					
area of top	456,444		SY		
area of slope	462,680		SY		
scarify top (flat) area		456,444	SY	0.20	91,289
12 inches soil on top of dump		152,148	CY	1.25	190,185
12 inches soil on slope		154,227	CY	1.25	192,784
seed entire surface		190	ACRE	174	33,060
Total - waste dump "A" reclamation					507,318

0

Waste Dump "B" -- 94 Acres

51 acres 0.542553

area of top	197,222		SY		
area of slope	258,240		SY		
scarify top (flat) area		197,222	SY	0.20	39,444
12 inches soil on top of dump		65,741	CY	1.25	82,176
12 inches soil on slope		86,080	CY	1.25	107,600
seed entire surface		94	ACRE	174	16,356
Total - Waste dump "B" reclamation					245,577

21,401
44,585
29,052
8,874
103,912

Waste Dump "C" - 120 Acres

88 acres 0.733333

area of top	344,222		SY		
area of slope	238,633		SY		
scarify top (flat) area		344,222	SY	0.20	68,844
12 inches soil on top of dump		114,741	CY	1.25	143,426
12 inches soil on slope		79,544	CY	1.25	99,430
seed entire surface		120	ACRE	174	20,880
Total - Waste Dump "C" reclamation					332,581

50,486
105,179
26,846
15,312
197,823

Leach Pad - 254 Acres *

Rinse Heap - 12% of total ore neutralized; rinsing & evaporation for 18 months

lime (2.5 lbs/ton)x(\$0.025/lb)x(5.9M ton)	5,900,000	ton	0.063	368,750	
labor, power & pump for draindown & evaporation for 18 months	1	lot	446,640	446,640	
subtotal for heap rinse & evaporation				815,390	

0.27 220,155

area of top	788,556		SY		
area of slope	441,653		SY		
12 inch clay cap on top	12	262,852	CY	2.50	657,130
12 inch clay cap on slope	12	147,218	CY	2.50	368,044
24 inch crushed rock on top	24	525,704	CY	2.50	1,314,260
24 inch crushed rock on slope	24	294,435	CY	2.50	736,088
12 inches soil on top	12	262,852	CY	1.25	328,565
12 inches soil on slope	12	147,218	CY	1.25	184,022
seed entire surface		254	ACRE	174	44,196
subtotal - clay, crushed rock, soil & seeding for leach pad				3,632,306	

0.27 980,723

* POO has 266 acres. 12 acres is considered buffer area around the leach pad & is included in other areas (pond area, crusher area, powerline corridor, etc.)

1/24/97 REVISION

3/3

3-YR ESTIMATE

Reclamation of Miscellaneous Areas**Pond Area - 11 Acres**

raffinate pond - 12 inches soil	4,852 CY	1.25	6,065
PLS pond - 12 inches soil	4,852 CY	1.25	6,065
water runoff pond - 12 inches soil	8,229 CY	1.25	10,286
seed 3 pond areas	11 ACRE	174	1,914

Total - Pond Area Reclamation

24,330

24,330

Plant & Crusher Area - 25.5 Acres

apply 12 inches soil	41,080 CY	1.25	51,350
seed entire area	26 ACRE	174	4,437

Total - Plant Area Reclamation

55,787

20 acres

0.784314

43,755

Haul Roads - 40 Acres

scarify	192,889 SY	0.20	38,578
contour	64,296 CY	1.25	80,370
apply 12 inches soil	67,511 CY	1.25	84,389
seed entire area	40 ACRE	174	6,960

Total - Haul Road Reclamation

210,297

21 acres

0.525

110,406

Power Line Corridor - 64 Acres*

*Note the Power Co. has requested the power line remain open	64 ACRE	n/c	0
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Reseed Soil Stockpile Areas - 40 Acres

reseed 40 acres	40 ACRE	174	6,960
Total - Reseed Soil Stockpile Areas			6,960

20 acres

0.5

3,480

Fences & Berms* Around Open Pits

fence around Sentinel Pit 1	5,620 LF	3.02	16,972
fence around Sentinel Pit 2	2,140 LF	3.02	6,463
fence around Centennial Pit	8,980 LF	3.02	27,120
fence around GTO Pit	7,410 LF	3.02	22,378

Total - Pit Fences

72,933

50,555

*Note-Cost for berms is not shown, as these will be built during during plant construction phase. Fencing material will be recycled from the leach pad area.

Surface Drainage Diversion Ditches*

leach pad area	7,473 CY	1.25	9,341
plant area	1,595 CY	1.25	1,994
crusher area	1,810 CY	1.25	2,263
dump areas	13,668 CY	1.25	17,085

Total - Drainage Diversion Ditches

30,683

0.27

2,522

1

1,994

1

2,263

0.53

9,055

15,833

*Work is for removing diversion sediment structures

7/24/97 REVISION 3/3
3-YR ESTIMATE

DIRECT COSTS

Mobilization and Demobilization	1 LOT	35,000	35,000	0.75	26,250
Leach Pad & Waste Dumps	combined total of previous items	5,533,170			1,502,613
Misc. Surface Areas parking lots & processing areas	combined total of previous items	400,989			248,359
Total Direct Costs		5,969,160			1,777,221

INDIRECT COSTS

Plant Dismantling*	1 LOT	450,000	450,000	0.75	337,500
*Assumes no salvage value. Dismantling involves removal of above ground above ground structures & the breaking up and burial of concrete foundations.					
Plugging monitoring wells with concrete from bottom to top					
3 of the Navajo wells considered pit de-watering wells					
process area: 5 wells; 4-inch dia, 500 ft	2,500 lf	2.20	5,500	3 wells	1500 3,300
Navajo wells: 6 wells; 6-inch dia, 1200 ft	7,200 lf	3.30	23,760	4 wells	4800 15,840
Engineering - 5% of total direct costs	1 LOT	298,458	298,458		88,861
Owners Cost --- OMITTED ---					
Water quality monitoring for 11 wells					
2 samples per well per year for 5 years	110 sample	500	55,000	70 samples	35,000
Revegetation monitoring for 5 years	5 year	5,000	25,000	0.27	1,350
Construction Management	1 LOT	180,199	180,199	0.27	48,654
Contingency (10% of Total Direct Costs)	1 LOT	596,916	596,916		177,722
Total Indirect Costs		1,634,833			708,227
Unadjusted Total Costs		7,603,993			2,485,448
Escalation for 5 years at 2.58%		1,032,853		3 years of escalation	197,380
TOTAL RECLAMATION COSTS (2002-\$)		\$8,636,846		actual 3-yr amount	\$2,682,828
average \$/acre cost = \$8,241					
30% of total reclamation costs (314.4 acres of disturbance)		\$2,591,054		(30% est) - (3-yr est) percent difference	(91,774) -0.035

10/1/97